

WE CLAIM:

1. A dispensing and application apparatus wherein the apparatus is designed to contain a flowable substance, comprising:

first and second compartments;

first and second frangible seals;

at least one sheet divided by at least one seal to form said first and second compartments;

an applicator having a periphery and being joined to the at least one sheet with at least one applicator bond;

a chamber being formed by the at least one sheet, and the applicator, and bounded in part by the applicator, the at least one applicator bond, and a frangible seal;

wherein said first frangible seal separates said first and second compartments and said second frangible seal separates said second compartment and said chamber; and,

wherein said frangible seals are designed to break when exposed to a predetermined pressure, thereby creating a channel permitting fluid communication between said first compartment, said second compartment, said chamber and said applicator.

2. The apparatus of claim 1, wherein said frangible seals are formed to have at least one sinusoidal shape.

3. The apparatus of claim 1, wherein said frangible seals comprise a stress riser.
4. The apparatus of claim 3, wherein said stress riser comprises a chevron shape having a sharp inflection point oriented in the direction of said first and second compartments.
5. The apparatus of claim 3, wherein said frangible seal is formed to include a frangible seal first edge and a frangible seal second edge, and the chevron shape has a rear chevron inflection point whereby a maximum orthogonal distance from the rear inflection point to the frangible seal second edge is less than a maximum orthogonal distance between the frangible seal first edge and the frangible seal second edge.
6. The apparatus of claim 3, wherein said stress riser is formed of at least one sharp inflection point oriented in the direction of said first and second compartments.
7. The apparatus of claim 1, wherein the applicator comprises a porous absorbent pad.
8. The apparatus of claim 1, wherein said applicator is a foam pad.
9. The apparatus of claim 1, wherein said at least one sheet comprises a flexible laminated foil.

10. The apparatus of claim 1, wherein the surface area of the bond area is between 62.5% and 87.5% of the surface area of the applicator.

11. The apparatus of claim 1, further comprising an applicator cover adapted to releasably enclose the applicator.

12. The apparatus of claim 1, wherein said at least one seal and said frangible seals are thermal seals.

13. A dispensing and application apparatus wherein the apparatus is designed to contain a flowable substance, comprising:

at least two a compartments;

a first sheet section and a second sheet section interconnected with a primary seal and at least two frangible seals to form said compartments, the frangible seals being designed to break when exposed to a predetermined pressure thereby creating a channel permitting fluid communication between the compartments and a chamber;

an applicator having a periphery and being joined to the first sheet section and the second sheet section with at least one applicator bond; and

the chamber being formed by the first sheet section, the second sheet section, and the applicator, and bounded in part by the applicator, the applicator bond, and one frangible seal.

14. The apparatus of claim 13, wherein the first sheet section and the second sheet section are formed from a single sheet by folding the sheet along a fold line, whereby the first sheet section and second sheet section are additionally interconnected at the fold line.

15. The apparatus of claim 13, wherein said frangible seals are formed to have at least one sinusoidal shape.

16. The apparatus of claim 15, wherein said frangible seals further comprise a stress riser.

17. The apparatus of claim 16, wherein said stress riser comprises a substantially chevron shape having a sharp inflection point oriented in the direction of said compartment.

18. The apparatus of claim 16, wherein said stress riser is formed of at least one sharp inflection point oriented in the direction of said compartments.

19. The apparatus of claim 13, wherein said first sheet section and said second sheet section comprise flexible laminated foil.

20. The apparatus of claim 13, wherein the surface area of the bond area is between 62.5% and 87.5% of the surface area of the applicator.

21. The apparatus of claim 13, further comprising an applicator cover adapted to releasably enclose the applicator.

22. The apparatus of claim 13, wherein said primary seal and said frangible seal are thermal seals.

23. A dispensing, mixing, and application apparatus wherein the apparatus is designed to separately contain a plurality of substances, comprising:

at least one sheet divided by a plurality of frangible seals to form a plurality of compartments including a first compartment housing a first substance and a second compartment housing a second substance;

a first frangible seal located at a common edge between the first compartment and a chamber, designed to break when exposed to a first predetermined pressure thereby creating a channel permitting communication between the first compartment and the chamber;

a second frangible seal located at an intermediate edge between the first compartment and the second compartment, designed to break when exposed to a second predetermined pressure, less than or equal to the first predetermined pressure, thereby creating a channel permitting communication between the first compartment and the second compartment permitting mixing of the first and second substances; and

the chamber being formed by the at least one sheet and dispensing a mixture of at least the first and second substances.

24. The apparatus of claim 23, further including an applicator having a periphery and being joined to the at least one sheet with at least one applicator bond so that the chamber is bounded in part by the applicator, the at least one applicator bond, and the first frangible seal.

25. The apparatus of claim 23, wherein the chamber has a dispensing conduit having a removable conduit end cap so that the dispensing conduit may transmit the mixture of the first and second substances to a dispensing point when the removable conduit end cap is removed.

26. The apparatus of claim 23, wherein the at least one sheet includes a first sheet section and a second sheet section.

27. The apparatus of claim 26, wherein the first sheet section and the second sheet section are formed from a single sheet by folding the sheet along a fold line.

28. The apparatus of claim 23, wherein the chamber is additionally bounded in part by the first frangible seal.

29. The apparatus of claim 23, wherein the first and the second frangible seals are formed to have at least one sinusoidal shape.

30. The apparatus of claim 23, wherein the first and the second frangible seals comprise a stress riser.

31. The apparatus of claim 30, wherein each stress riser comprises a chevron shape having a sharp inflection point oriented in the direction of the associated compartment.

32. The apparatus of claim 31, wherein each frangible seal is formed to include a frangible seal first edge and a frangible seal second edge, and the chevron shape has a rear chevron inflection point whereby a maximum orthogonal distance from the rear inflection point to the frangible seal second edge is less than a maximum orthogonal distance between the frangible seal first edge and the frangible seal second edge.

33. The apparatus of claim 30, wherein each stress riser is formed of at least one sharp inflection point oriented in the direction of the associated compartment.

34. The apparatus of claim 24, wherein the applicator comprises a porous absorbent pad.

35. The apparatus of claim 34, wherein the applicator is a foam pad.

36. The apparatus of claim 23, wherein the at least one sheet comprises a flexible laminated foil material.

37. The apparatus of claim 24, wherein the applicator bond exterior edge is within the applicator periphery.

38. The apparatus of claim 24, wherein the surface area of the bond area is between 62.5% and 87.5% of the surface area of the applicator.

39. The apparatus of claim 23, wherein the at least one seal and the frangible seals are thermal seals.